

TWO NEW PINYON VARIETIES FROM ARIZONA

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The pinyon (nut pine) of central Arizona with 1 slender leaf or needle in a fascicle, commonly referred to Pinus monophylla Torr. & Frém., is named here as a new variety of P. edulis Engelm. Another pinyon of the international border of south-eastern Arizona, southwestern New Mexico, and adjacent northern Mexico, is distinguished as a new variety of its species, P. cembroides Zucc. (sens. strict.).

Many species of Pinus have broad geographic ranges distributed over widely varying climates, altitudes, and soils. Careful taxonomic examination of a widespread species often reveals the presence of geographic races and varieties. Like other pines, the pinyons exhibit similar geographic variations.

The 8 species of pinyons (nut pines) in southwestern United States and Mexico are grouped together as Pinus L. subsect. Cembroides Engelm. (St. Louis Acad. Sci. Trans. 4: 176, 178. 1880). Distribution maps have been published by William B. Critchfield and Little (U.S. Dept. Agr. Misc. Pub. 991, maps 15-18. 1966). Four species are native in the United States, though treated by some authors as varieties under the oldest name Pinus cembroides (sens. lat.). Morphological differences in seeds and other characters are sufficient not only for the retention of these 4 species, but also for the further recognition of additional geographical varieties and unnamed races.

From 1937 to 1941 I did research on Pinus edulis Engelm., the common species of pinyon, in Arizona and New Mexico as part of the research project of management of pinyon-juniper woodlands by the United States Forest Service (U.S. Dept. Agr., Agr. Handb. 271: 398-403, illus. 1965). The large edible seeds of that species are known as pinyon nuts (from Spanish pifion, plural pifiones), pine nuts, and Indian nuts. They provide an annual harvest of about a million pounds or more. A taxonomic study of pinyons was begun and an abstract was published (Amer. Jour. Bot. 27 (10) sup. 24s. 1940). However, work on the project was discontinued during World War II.

One new variety from the Edwards Plateau in southwestern Texas was published, Texas pinyon, Pinus cembroides Zucc. var. remota Little (Wrightia 3: 183. 1966). Owing to delay in completing the taxonomic study, two additional varieties alluded to in that article are published here. A field trip to Arizona in May 1968 provided the opportunity for further study and collections of the two new varieties.